CITY OF LODI
FACT SHEET
LODI CENTRAL PLUME AREA
DUAL PHASE EXTRACTION PHASE I

INTRODUCTION

The City of Lodi is beginning the next phase of remediation work in the Lodi Central Plume Source Area in August 2006. The Central Plume Source Area (CPSA) is bounded by Pine Street to the north, Oak Street to the south, Church Street to the east, and Pleasant Avenue to the west (Figure 1). This area has been impacted by releases of perchloroethene (PCE, also known as tetrachloroethene) and other chemicals to the environment. PCE has migrated downward through soil to groundwater and is present at chemical concentrations significantly above limits allowed by the State of California. The City is currently operating an Interim Soil Vapor Extraction System in the CPSA to prevent the migration of soil gases impacted by PCE and other chemicals through the foundations of buildings in the CPSA. The initiation of the CPSA remediation will expand the soil vapor extraction effort, combined with a groundwater extraction and treatment component.

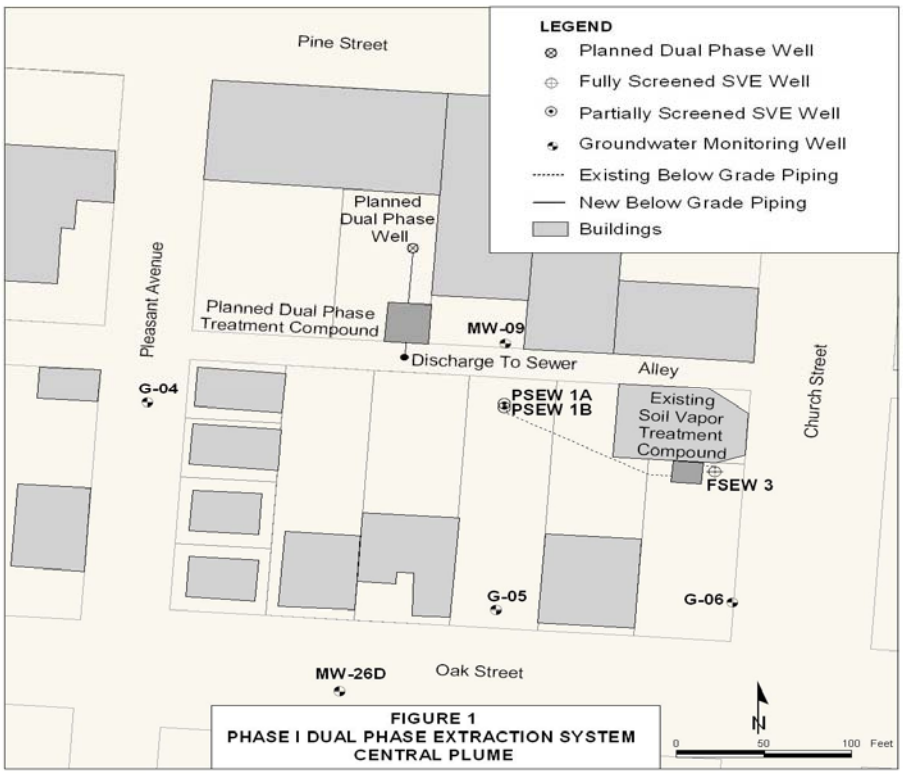

FIGURE 1
PHASE I DUAL PHASE EXTRACTION SYSTEM
CENTRAL PLUME

HOW WILL THE CENTRAL PLUME SOURCE AREA BE REMEDIATED?

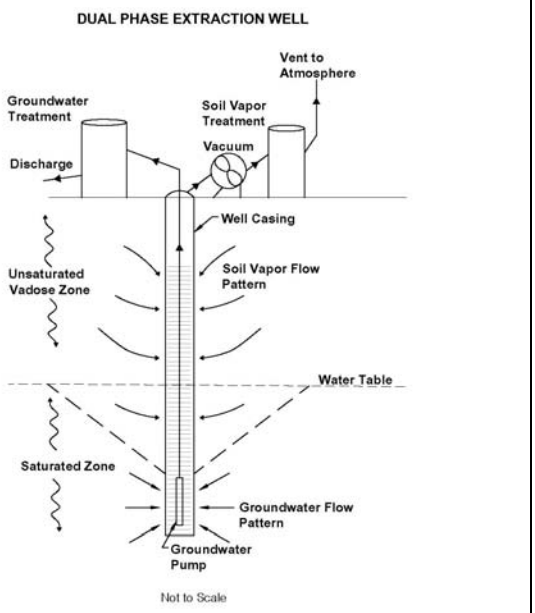

FIGURE 2 SCHEMATIC DUAL PHASE EXTRACTION WELL PHASE 1

A work plan has been submitted to the Regional Water Quality Control Board (RWQCB) describing the initial component, Phase I, of the CPSA remediation program. Copies are available at the Public Library and on the City's website at www.lodi.gov. Phase I includes the installation of a dual-phase extraction (DPE) well in the area shown on Figure 1. A DPE well is specifically designed to extract both groundwater and soil vapor (Figure 2). Soil vapor extraction (SVE) is a cost-effective way of removing contaminants from unsaturated soil located above the water table. Pumping and treating groundwater is a demonstrated approach to capturing and remediating groundwater. By pumping enough water to lower the water table, more unsaturated soil is available for soil vapor extraction. In the CPSA, the City will extract contaminated groundwater and soil vapor from the same well. Soil vapor will be sent to a temporary dual phase treatment pad and treated using granular activated carbon prior to discharge to the atmosphere. Groundwater will also be treated at the treatment pad and then discharged to the sanitary sewer. Phase I will generate site-specific soil and groundwater information needed to facilitate the design of Phase II, the full CPSA remediation program. Phase II will likely require the installation of several DPE wells in and around the CPSA.

WHAT ARE THE BENEFITS TO LODI OF DUAL PHASE EXTRACTION?

DPE provides a significant potential cost benefit to the City in three ways. First, using one well for both groundwater and soil vapor extraction will save the City the cost of multiple well installations. Second, fewer wells means less trenching and below-grade piping to connect wells and treatment systems. And third, lowering the water table to dewater contaminated soil will remediate the CPSA faster, as SVE generally removes soil contaminants quickly, and will remove contaminants that would be present below the water table that would otherwise continue to contaminate groundwater.

HOW WILL THE WORK BE CONDUCTED?

The City anticipates installing the first DPE well and associated equipment in August 2006. We anticipate this work will take two to four weeks. Following the installation of the DPE well, piping, and treatment system, the system will be turned on and operated until the installation of Phase II. Phase II is currently planned for installation in late 2006.

For additional information, please contact:

Richard Prima, Public Works Director, City of Lodi
209-333-6759
or
Marie McCrink, Case Officer, Central Valley Regional Water Quality Control Board
916-464-4816